Validated By CRFValidator v 1.0.3

Application No: 10556649 Version No: 1.0

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Output Set:

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Finished: 2007-11-02 20:29:00.796
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 59 ms
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Total Errors: 0
No. of SeqIDs Defined: 34
Actual SeqID Count: 34

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<110> Ruvkun, Gary
Mak, Ho Yi

<120> Methods and Compositions Relating to Lipid Accumulation

<130> 00786/440007

<140> 10556649
<141> 2007-11-02

<150> PCT/US2004/019186
<151> 2004-06-16

<150> US 60/570,374
<151> 2004-05-12

<150> US 60/550,257
<151> 2004-03-05

<150> US 60/483,199
<151> 2003-06-27

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<170> PatentIn version 3.3

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<210> 4
<211> 175
<212> PRT
<213> Caenorhabditis elegans

<400> 4

Ser Phe Arg Ser Ser Leu Ser Ser Val Thr Ala Pro Glu Leu Ala Ser
1 5 10 15

Val Ala Ile Lys Ala Ala Leu Glu Arg Gly Ala Val Lys Pro Ser Ser
20 25 30

Ile Gln Glu Val Phe Leu Gly Gln Val Cys Gln Ala Asn Ala Gly Gln
35 40 45

Ala Pro Ala Arg Gln Ala Ala Leu Gly Ala Gly Leu Asp Leu Ser Val
50 55 60

Ala Val Thr Thr Val Asn Lys Val Cys Ser Ser Gly Leu Lys Ala Ile
65 70 75 80

Ile Leu Ala Ala Gln Gln Ile Gln Thr Gly His Gln Asp Phe Ala Ile
85 90 95

Gly Gly Gly Met Glu Ser Met Ser Gln Val Pro Phe Tyr Val Gln Arg
100 105 110

Gly Glu Ile Pro Tyr Gly Gly Phe Gln Val Ile Asp Gly Ile Val Lys
115 120 125

Asp Gly Leu Thr Asp Ala Tyr Asp Lys Val His Met Gly Asn Cys Gly
130 135 140

Glu Lys Thr Ser Lys Glu Met Gly Ile Thr Arg Lys Asp Gln Asp Glu
145 150 155 160

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Tyr Ala Ile Asn Ser Tyr Lys Lys Ser Ala Lys Ala Val Glu Asn
                165                 170                 175


<210>  5
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<212>  PRT
<213>  Saccharomyces cerevisiae

<400>  5

Gly Phe Lys Gly Ala Phe Lys Asp Val Asn Thr Asp Tyr Leu Leu Tyr
1               5                   10                  15


Asn Phe Leu Asn Glu Phe Ile Gly Arg Phe Pro Glu Pro Leu Arg Ala
            20                  25                  30


Asp Leu Asn Leu Ile Glu Glu Val Ala Cys Gly Asn Val Leu Asn Val
        35                  40                  45


Gly Ala Gly Ala Thr Glu His Arg Ala Ala Cys Leu Ala Ser Gly Ile
    50                  55                  60


Pro Tyr Ser Thr Pro Phe Val Ala Leu Asn Arg Gln Cys Ser Ser Gly
65                  70                  75                  80


Leu Thr Ala Val Asn Asp Ile Ala Asn Lys Ile Lys Val Gly Gln Ile
                85                  90                  95


Asp Ile Gly Leu Ala Leu Gly Val Glu Ser Met Thr Asn Asn Tyr Lys
            100                 105                 110


Asn Val Asn Pro Leu Gly Met Ile Ser Ser Glu Glu Leu Gln Lys Asn
        115                 120                 125


Arg Glu Ala Lys Lys Cys Leu Ile Pro Met Gly Ile Thr Asn Glu Asn
    130                 135                 140


Val Ala Ala Asn Phe Lys Ile Ser Arg Lys Asp Gln Asp Glu Phe Ala
145                 150                 155                 160


Ala Asn Ser Tyr Gln Lys Ala Tyr Lys Ala Lys Asn Glu
                165                 170


<210>  6
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<211> 167
<212> PRT
<213> Yarrowia lipolytica

<400> 6

Gly Gly Lys Gly Leu Phe Lys Asp Thr Ser Ser Ser Glu Leu Leu Ala
1 5 10 15

Ser Leu Leu Glu Gly Leu Val Lys Glu Ser Lys Ile Asp Pro Lys Leu
20 25 30

Ile Gly Asp Val Val Cys Gly Asn Val Leu Ala Ala Gly Ala Gly Ala
35 40 45

Thr Glu His Arg Ala Ala Cys Leu Val Ala Gly Ile Pro Glu Thr Val
50 55 60

Pro Phe Val Ala Leu Asn Arg Gln Cys Ser Ser Gly Leu Met Ala Val
65 70 75 80

Asn Asp Val Ala Asn Lys Ile Arg Ala Gly Gln Ile Asp Ile Gly Ile
85 90 95

Gly Cys Gly Val Glu Ser Met Ser Asn Gln Tyr Gly Pro Asn Ser Val
100 105 110

Thr Pro Phe Ser Asn Lys Phe Gln Asn Asn Glu Glu Ala Lys Lys Cys
115 120 125

Leu Ile Pro Met Gly Ile Thr Ser Glu Asn Val Ala Ala Lys Tyr Asn
130 135 140

Val Ser Arg Lys Ala Gln Asp Ala Phe Ala Ala Lys Ser Tyr Glu Lys
145 150 155 160

Ala Ala Ala Ala Gln Ala Ala
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<210> 7
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<212> PRT
<213> Arabidopsis thaliana

<400> 7

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Ala Arg Arg Gly Gly Phe Lys Asp Thr Leu Pro Asp Asp Leu Leu Ala
1               5                   10                  15

Ser Val Leu Lys Ala Val Val Glu Arg Thr Ser Leu Asp Pro Ser Glu
            20                  25                  30

Val Gly Asp Ile Val Val Gly Thr Val Ile Ala Pro Gly Ser Gln Arg
        35                  40                  45

Ala Met Glu Cys Arg Val Ala Ala Tyr Phe Ala Gly Phe Pro Asp Ser
    50                  55                  60

Val Pro Val Arg Thr Val Asn Arg Gln Cys Ser Ser Gly Leu Gln Ala
65                  70                  75                  80

Val Ala Asp Val Ala Ala Ser Ile Arg Ala Gly Tyr Tyr Asp Ile Gly
                85                  90                  95

Ile Gly Ala Gly Val Glu Ser Met Ser Thr Asp His Ile Pro Gly Gly
            100                 105                 110

Gly Phe His Gly Ser Asn Pro Arg Ala Gln Asp Phe Pro Lys Ala Arg
        115                 120                 125

Asp Cys Leu Leu Pro Met Gly Ile Thr Ser Glu Asn Val Ala Glu Arg
    130                 135                 140

Phe Gly Val Thr Arg Glu Glu Gln Asp Met Ala Ala Val Glu Ser His
145                 150                 155                 160

Lys Arg Ala Ala Ala Ala Ile Ala Ser
                165
```

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<212> PRT
<213> Drosophila melanogaster

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Ser Phe Gln Ser Gln Leu Ala Pro Leu Thr Ala Thr Gln Leu Gly Ala
1               5                   10                  15

Arg Ala Ile Glu Ala Ala Ile Glu Lys Ala Gly Ile Ala Lys Thr Asp
            20                  25                  30
```

```
Val Gln Glu Val Ile Met Gly Asn Val Val Ser Ala Gly Leu Gly Gln
        35                  40                  45

Ala Pro Ala Arg Gln Ala Ala Ile Phe Ala Gly Leu Pro Thr Asn Val
    50                  55                  60

Cys Cys Thr Thr Val Asn Lys Val Cys Ser Ser Gly Met Lys Ala Val
65                  70                  75                  80

Met Leu Gly Ala Gln Ser Leu Met Leu Gly Tyr Ala Asp Val Val Val
                85                  90                  95

Ala Gly Gly Met Glu Ser Met Ser Asn Val Pro Tyr Tyr Leu Lys Arg
            100                 105                 110

Gly Ala Thr Pro Tyr Gly Gly Val Asn Leu Thr Asp Gly Ile Val Phe
        115                 120                 125

Asp Gly Leu Trp Asp Val Tyr Asn Lys Phe His Met Gly Asn Cys Ala
    130                 135                 140

Glu Asn Thr Ala Lys Lys Leu Glu Ile Thr Arg Gln Gln Gln Asp Asp
145                 150                 155                 160

Phe Ala Ile Glu Ser Tyr Lys Arg Ser Ala Ala Ala Trp Ala Asn
                165                 170                 175
```

<210> 9
<211> 166
<212> PRT
<213> Rattus norvegicus

<400> 9

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Ala Gly Arg Gly Gly Phe Lys Asp Thr Thr Pro Asp Glu Leu Leu Ser
1               5                   10                  15

Ala Val Leu Thr Ala Val Leu Gln Asp Val Lys Leu Lys Pro Glu Cys
            20                  25                  30

Leu Gly Asp Ile Ser Val Gly Asn Val Leu Glu Pro Gly Ala Gly Ala
        35                  40                  45
```

```
Val Met Ala Arg Ile Ala Gln Phe Leu Ser Gly Ile Pro Glu Thr Val
    50                  55                  60

Pro Leu Ser Ala Val Asn Arg Gln Cys Ser Ser Gly Leu Gln Ala Val
65                  70                  75                  80

Ala Asn Ile Ala Gly Gly Ile Arg Asn Gly Ser Tyr Asp Ile Gly Met
                85                  90                  95

Ala Cys Gly Val Glu Ser Met Ser Leu Ser Asn Arg Gly Asn Pro Gly
            100                 105                 110

Asn Ile Ser Ser Arg Leu Leu Glu Ser Asp Lys Ala Arg Asp Cys Leu
        115                 120                 125

Ile Pro Met Gly Ile Thr Ser Glu Asn Val Ala Glu Arg Phe Gly Ile
    130                 135                 140

Ser Arg Gln Lys Gln Asp Ala Phe Ala Leu Ala Ser Gln Gln Lys Ala
145                 150                 155                 160

Ala Ser Ala Gln Ser Lys
                165
```

<210> 10
<211> 166
<212> PRT
<213> Mus musculus

<400> 10

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Ala Ser Arg Gly Gly Phe Lys Asn Thr Thr Pro Asp Glu Leu Leu Ser
1               5                   10                  15

Ala Val Leu Thr Ala Val Leu Gln Asp Val Arg Leu Lys Pro Glu Gln
            20                  25                  30

Leu Gly Asp Ile Ser Val Gly Asn Val Leu Glu Pro Gly Ala Gly Ala
        35                  40                  45

Val Met Ala Arg Ile Ala Gln Phe Leu Ser Gly Ile Pro Glu Thr Val
    50                  55                  60

Pro Leu Ser Thr Val Asn Arg Gln Cys Ser Ser Gly Leu Gln Ala Val
65                  70                  75                  80
```

```
Ala Asn Ile Ala Gly Gly Ile Arg Asn Gly Ser Tyr Asp Ile Gly Met
                85                  90                  95

Ala Cys Gly Val Glu Ser Met Ser Leu Ser Gly Met Gly Asn Pro Gly
            100                 105                 110

Asn Ile Ser Ser Arg Leu Leu Glu Ser Glu Lys Ala Arg Asp Cys Leu
        115                 120                 125

Thr Pro Met Gly Met Thr Ser Glu Asn Val Ala Glu Arg Phe Gly Ile
    130                 135                 140

Ser Arg Gln Lys Gln Asp Asp Phe Ala Leu Ala Ser Gln Gln Lys Ala
145                 150                 155                 160

Ala Ser Ala Gln Ser Arg
                165
```

<210> 11
<211> 166
<212> PRT
<213> Homo sapiens

<400> 11

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Ala Gly Arg Gly Gly Phe Lys Asp Thr Thr Pro Asp Glu Leu Leu Ser
1               5                   10                  15

Ala Val Met Thr Ala Val Leu Lys Asp Val Asn Leu Arg Pro Glu Gln
            20                  25                  30

Leu Gly Asp Ile Cys Val Gly Asn Val Leu Gln Pro Gly Ala Gly Ala
        35                  40                  45

Ile Met Ala Arg Ile Ala Gln Phe Leu Ser Asp Ile Pro Glu Thr Val
    50                  55                  60

Pro Leu Ser Thr Val Asn Arg Gln Cys Ser Ser Gly Leu Gln Ala Val
65                  70                  75                  80

Ala Ser Ile Ala Gly Gly Ile Arg Asn Gly Ser Tyr Asp Ile Gly Met
                85                  90                  95
```

```
Ala Cys Gly Val Glu Ser Met Ser Leu Ala Asp Arg Gly Asn Pro Gly
            100                 105                 110

Asn Ile Thr Ser Arg Leu Met Glu Lys Glu Lys Ala Arg Asp Cys Leu
        115                 120                 125

Ile Pro Met Gly Ile Thr Ser Glu Asn Val Ala Glu Arg Phe Gly Ile
    130                 135                 140

Ser Arg Glu Lys Gln Asp Thr Phe Ala Leu Ala Ser Gln Gln Lys Ala
145                 150                 155                 160

Ala Arg Ala Gln Ser Lys
                165
```

<210> 12
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<213> Caenorhabditis elegans

<400> 12

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Ala Ser Thr Leu Asn Asp Gly Ala Ala Ala Val Ile Val Ala Ser Gln
1               5                   10                  15

Glu Ala Val Ser Glu Gln Ser Leu Lys Pro Leu Ala Arg Ile Leu Ala
            20                  25                  30

Tyr Gly Asp Ala Ala Thr His Pro Leu Asp Phe Ala Val Ala Pro Thr
        35                  40                  45

Leu Met Phe Pro Lys Ile Leu Glu Arg Ala Gly Val Lys Gln Ser Asp
    50                  55                  60

Val Ala Gln Trp Glu Val Asn Glu Ala Phe Ser Cys Val Pro Leu Ala
65                  70                  75                  80

Phe Ile Lys Lys Leu Gly Val Asp Pro Ser Leu Val Asn Pro His Gly
                85                  90                  95

Gly Ala Val Ser Ile Gly His Pro Ile Gly Met Ser Gly Ala Arg Leu
            100                 105                 110

Ile Thr His Leu Val His Thr Leu Lys Ser Gly Gln Ile Gly Val Ala
        115                 120                 125
```

```
Ala Ile Cys Asn Gly Gly Gly Gly Ser Ser Gly Met Val Ile Gln Lys
    130                 135                 140

Leu
145
```

<210> 13
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<212> PRT
<213> Saccharomyces cerevisiae

<400> 13

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Ala Ser Gln Val Ser Asp Gly Val Ala Gly Val Leu Leu Ala Arg Arg
1               5                   10                  15

Ser Val Ala Asn Gln Leu Asn Leu Pro Val Leu Gly Arg Tyr Ile Asp
            20                  25                  30

Phe Gln Thr Val Gly Val Pro Pro Glu Ile Met Gly Val Gly Pro Ala
        35                  40                  45

Tyr Ala Ile Pro Lys Val Leu Glu Ala Thr Gly Leu Gln Val Gln Asp
    50                  55                  60

Ile Asp Ile Phe Glu Ile Asn Glu Ala Phe Ala Ala Gln Ala Leu Tyr
65                  70                  75                  80

Cys Ile His Lys Leu Gly Ile Asp Leu Asn Lys Val Asn Pro Arg Gly
                85                  90                  95

Gly Ala Ile Ala Leu Gly His Pro Leu Gly Cys Thr Gly Ala Arg Gln
            100                 105                 110

Val Ala Thr Ile Leu Arg Glu Leu Lys Lys Asp Gln Ile Gly Val Val
        115                 120                 125

Ser Met Cys Ile Gly Thr Gly Met Gly Ala Ala Ala Ile Phe Ile Lys
    130                 135                 140

Glu
145
```

<210> 14
<211> 147
<212> PRT
<213> Yarrowia lipolytica

<400> 14

Ala Ser Gln Ile Ser Asp Gly Ala Gly Ala Val Leu Leu Met Arg Arg
1 5 10 15

Ser Val Ala Glu Lys Leu Gly Gln Pro Ile Leu Ala Lys Phe Val His
20 25 30

Cys Lys Thr Val Gly Val Pro Pro Glu Leu Met Gly Ile Gly Pro Ala
35 40 45

Tyr Ala Ile Pro Ala Val Leu Glu Asp Leu Gly Leu Thr Val Asn Asp
50 55 60

Val Asp Val Phe Glu Ile Asn Glu Ala Phe Ala Ser Gln Ala Leu Phe
65 70 75 80

Ser Ile Gln His Cys Gly Ile Asp Glu Ser Lys Val Asn Pro Arg Gly
85 90 95

Gly Ala Ile Ala Ile Gly His Pro Leu Gly Ala Thr Gly Ala Arg Gln
100 105 110

Phe Ala Thr Leu Leu Ser Glu Leu Lys Glu Ser Gly Lys Lys Val Gly
115 120 125

Val Thr Ser Met Cys Ile Gly Thr Gly Met Gly Ala Ala Ser Leu Val
130 135 140

Val Ala Glu
145

<210> 15
<211> 166
<212> PRT
<213> Arabidopsis thaliana

<400> 15

Ala Ser Gln Ile Ser Asp Gly Ala Gly Ala Val Leu Leu Met Lys Arg
1 5 10 15

```
Ser Leu Ala Met Lys Lys Gly Leu Pro Ile Leu Gly Val Phe Arg Ser
            20                  25                  30

Phe Ala Val Thr Gly Val Glu Pro Ser Val Met Gly Ile Gly Pro Ala
        35                  40                  45

Val Ala Ile Pro Ala Ala Thr Lys Leu Ala Gly Leu Asn Val Ser Asp
    50                  55                  60

Ile Asp Leu Phe Glu Ile Asn Glu Ala Phe Ala Ser Gln Tyr Val Tyr
65                  70
```